

12  
I/O  
Not Expandable



# PR-12 Economy

Model: PR-12AC-R-E **AC**

Model: PR-12DC-DA-R-E **DC**



# PR-12

Model: PR-12AC-R **AC**

Model: PR-12DC-DA-R **DC**

Model: PR-12DC-DA-TN **DC**

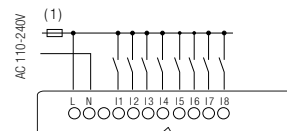
## Specifications

Item	PR-12AC-R-E	PR-12DC-DA-R-E	PR-12AC-R	PR-12DC-DA-R	PR-12DC-DA-TN
Memory	64 Functional Blocks		512 Functional Blocks / 5K Steps		
Data Retentivity	-		10 years		
Program Backup	10 years				
RTC	Backup at 25 °C: 20 days, RTC accuracy : MAX ±2S/day				
Cycle time	0.6ms - 8.0ms				
Expansion	-				
Communication	1 Program/RS232 port Modbus RTU/ASCII only can serve as slaves		1 Program/RS232 port Modbus RTU/ASCII Can work either as slave or as master in Modbus network.		
Certificate					
Operation Temp	-20 °C .. +55 °C				
Storage Temp	-40 °C .. +70 °C				
Protection	IP20				
Dimensions	72*90*61 (Unit, mm) 4DIN				
Installation	35mm-DIN rail or screw for installation				
Weight	Approx. 300g				

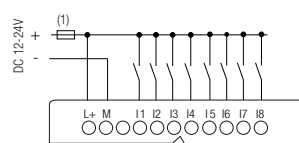
Item	PR-12AC-R-E	PR-12AC-R	PR-12DC-DA-R-E	PR-12DC-DA-R	PR-12DC-DA-TN
Nominal voltage	AC 110V-240V		DC 12-24V		
Operating limits	AC 85 - 265V		DC 10.8-28.8V		
The main frequency range	47-63Hz		-		
Immunity from micro power	-		Typ 5 ms		
Max startup current	-		Max 0.25A		Max 0.1A
Isolation voltage	1780V AC		-		
Max absorbed power	38 mA (85V AC) 30 mA (265V AC)	48.5 mA (85V AC) 35 mA (265V AC)	3.2 W (10.8V DC) 3.8 W (28.8V DC)	3.5 W (10.8V DC) 4 W (28.8V DC)	2 W (10.8V DC) 2.3 W (28.8V DC)
Protection against polarity inversions	Yes				
Input No	8 (I1-I8)				
Digital input	8 (I1-I8)				
Analogue input	-		4 (I1-I4) (0..10V DC)		
Input voltage	AC 110-240V		DC 0-28.8V		
Input signal 0	AC 0-40V <0.03mA		(I1-I4) <0.1mA / (I5-I8) <1mA @ < 5V DC		
Input signal 1	AC 79-240V >0.06mA		(I1-I4) >0.3mA / (I5-I8) >1.7mA @ > 8V DC		
Input current	-		(I1-I4) 0.4mA / (I5-I8) 2.3mA @ 10.8V DC (I1-I4) 0.5mA / (I5-I8) 2.6mA @ 12.0V DC (I1-I4) 1.2mA / (I5-I8) 5.2mA @ 24V DC (I1-I4) 1.5mA / (I5-I8) 6.3mA @ 28.8V DC		
Response time	0 to 1: 120V AC : Typ. 50 ms 240V AC : Typ. 30 ms 1 to 0: 120V AC : Typ. 90 ms 240V AC : Typ.100 ms		(I1-I4): 0 to 1: Typ. 1.5 ms 1 to 0: Typ. 1.5 ms (I5-I8): 0 to 1: Typ. <1 ms 1 to 0: Typ. <1 ms		
Maximum counting frequency	Typ: 4 Hz		I1-I4: 4 Hz I5-I8: 60 kHz		
Sensor type	Contact or 3-wire PNP				
Input type	-		Resistive		
Isolation between power supply and inputs	-				
Isolation between inputs	-				
Protection against polarity inversions	Yes		-		
Measurement range	-		DC 0-10V		
Input impedance	-		Min 24KΩ Max 72KΩ		
Input voltage	-		28.8 V DC max		
Resolution	-		9bit 0.015V		10bit 0.01V
Accuracy at 25 °C	-		± (Max 0.03)V		± (Max 0.02)V
Accuracy at 55 °C	-		± (Max 0.06)V		± (Max 0.04)V
Isolation between analog inputs and power supply	-				
Cable length	-		10 m max shielded & twisted		

## I/O circuit diagrams

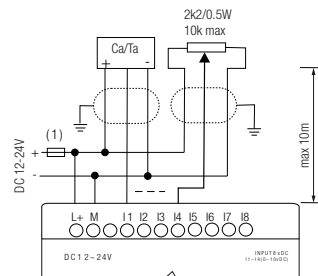
[Digital Input - Power AC]



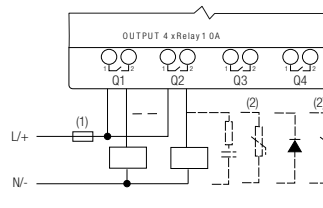
[Digital Input - Power DC]



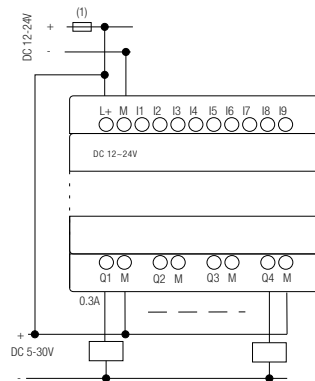
[DC analog inputs 0-10V - Power DC]



[Relay Outputs]



[Transistor Outputs PNP]



(1) - Fuse, circuit-breaker or circuit protector  
(2) - Inductive load;

## Specifications

Item	PR-12AC-R-E	PR-12DC-DA-R-E	PR-12AC-R	PR-12DC-DA-R	PR-12DC-DA-R-TN
Output No	4 (Q1-Q4)				
Output type	Relay output			Transistor (PNP)	
Continuous current	Resistive load 10A/Inductive load 2A			Max. 0.3 A per channel	
Max breaking voltage	AC 250 V DC 110 V			DC 5-30V	
Max breaking current	10A			0.65A	
Voltage drop	-			< 2 V for I = 0.3 A (at state 1)	
Galvanic isolation	Yes			-	
Max allowable power force	1250VA 300W			-	
Electrical durability expectancy	105 Operations at Rated Resistive Load			-	
Mechanical life	107 Operations at No Load condition			-	
Built-in protections	Against short-circuits: None Against overvoltages and overloads: None				
Response time	Operate Time : 15 ms max. Release Time : 10 ms max.			Make ≤ 1 ms Release ≤ 1 ms	
Mechanism	10Hz			-	
Resistor/light load	2Hz			10Hz	
Sensitive load	0.5Hz			-	
PWM frequency	-			10kHz	
PWM accuracy at 120Hz	-			< 0.5 % (20 % - 80 %) load at 10 mA	
PWM accuracy at 500Hz	-			< 0.5% (20 % - 80 %) load at 10 mA	
Max. Breaking current PWM	-			50mA	
Max. cable length PWM	-			20m	
PWM cyclic ratio	-			0 to 100 %	

